

Human Power Lab  
Honors Physics

There are four stations where we will test muscle groups to determine which has the greatest strength:

1. Climbing stairs.
2. Pushups.
3. Curls.
4. Dragging a mass.

For each station, all members of the group should complete the given task (unless you have cleared it with me).

Rubric: 27 Points Total

1. Rank the activities in order from the most powerful to the least powerful (2 points).
2. Write a procedure to find the power in each station (4 points; 1 for each station). **SHOW ME BEFORE BEGINNING THE NEXT PART OF THE EXPERIMENT.**
3. Perform the experiment according to your written procedure at each station. Record all needed variables and display in an appropriate chart (4 points).
4. Graph the power data of all students in your group using bar graphs, with power on the y-axis and the station on the x-axis (4 points). [You just need one graph on which to put all the data.]
5. Questions to answer:
  - a. In which station was the most power produced? Which muscles were used in this station (2 points)?
  - b. In which station was the least power produced? Which muscles were used in this station (2 points)?
  - c. Do your answers to parts a and b agree or disagree with number 1? Do your results make sense (3 points)?
  - d. Did the station that had the largest force result in the largest power output? Why or why not (3 points)?
6. Summary (3 points).